

VOLUME 28 • NUMBER 3 • SEPTEMBER 2005

OCCUPATIONAL

# Health & Safety

MAGAZINE

## FINDING A BALANCE

OH&S Programs in Alberta  
A Centennial Retrospective



## Eye Injuries CAN BE PREVENTED

by Jane Thrall

**P**ositioning Norman\* carefully in front of my biomicroscope, I inwardly sigh. Obviously in discomfort, Norman winces as I shine a bright light to illuminate the large piece of metal embedded deep in his cornea. In all my 17 years as a practicing optometrist, not one patient has come to me on the day of the incident, and Norman is no different.

He has left the iron filing for three days, somehow hoping it might go away on its own. Instead, the iron has begun to oxidize, leaving a ring of rust around the now well-entrenched foreign body. I'll have to try to remove this ring as well.

Most eye injuries (70 per cent) are the result of flying particles, with 60 per cent of the objects being smaller than a pinhead. Twenty per cent of ocular injuries are chemical, the most devastating from alkaline. Most of the remaining incidents involve objects swinging from a fixed position, such as a tree branch, tool or chain.

It is believed that 90 per cent of eye injuries can be prevented through the use of properly fitted safety eyewear. An estimated three out of five workers injured are not wearing eye protection at the time of the incident. Unfortunately, most workers are hurt while doing their regular job, and many believed the situation did not require safety eyewear. Not surprisingly, the vast majority of injuries to workers who are wearing their eye protection result from objects or chemicals going around or under the protector.

The Canadian Standards Association certifies safety eyewear through the use of markings on all approved safety lenses, frames and side shields. Safety frames are stronger than street-wear frames and are designed to prevent lenses from being pushed into the eyes. The lenses must be made of either plastic (CR-39) or polycarbonate, and must meet impact resistance and thickness standards.

I manage to extricate Norman's metal with a golf club spud (named for the shape of the instrument - removing a foreign body is like hitting a golf ball out of a deep sand trap). Most foreign bodies can be removed in this way, using magnification and a steady hand. But deeper or more embedded objects may require a surgeon's evaluation, particularly if there is any chance they have penetrated the entire thickness of the cornea.

With my Alger brush, a spinning instrument that gently abrades the cornea, I remove as much rust as I can reach

comfortably. This is delicate work so it's imperative that the patient hold as still as possible. In a few days, more rust will come to the surface and if Norman returns I can remove it as well.

The cornea, with more pain receptors per square millimetre than any other part of the body, scars easily. The next 24 hours are going to be unpleasant, but there is little I can do to ease the pain. Although there are drugs to reduce corneal inflammation, they are generally not necessary following superficial injuries like Norman's. To encourage healing and minimize scarring, Norman will rely on oral painkillers. If he keeps the eye well lubricated over the next several hours, he'll feel much better by morning.

An estimated three out of five workers injured are not wearing eye protection at the time of the incident.

When a particle has penetrated the protective outer layer of the cornea, as in Norman's case, there is always the risk of infection, which can result in significant vision loss in a short period of time. He'll need to watch for signs of worsening redness or discharge.

Within a couple of days Norman will be back at work and will have forgotten all about his close call. And I'll have likely seen a few more injuries similar to or worse than his.

\* Not his real name.

*Dr. Jane Thrall has been a practicing optometrist in Alberta and Manitoba. She is the past president of the Manitoba Association of Optometrists, and currently practices in Leduc and Drayton Valley. For more information about eye safety in the workplace, contact the Alberta Association of Optometrists or visit [www.optometrists.ab.ca](http://www.optometrists.ab.ca).*

O C C U P A T I O N A L

# Health & Safety

M A G A Z I N E

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Managing Editor - **Wally Baer**  
Editor - **Anita Jenkins**

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# SAGD Project



**A**s of June 30, 2005, Suncor's SAGD (Firebag) construction project had logged 4.5 million person hours worked. Despite the huge scale of this undertaking, there have been only three lost time injuries since the operation began in November 2001.

"At times our workforce exceeds 1,000 people, and since we are located on a remote site 150 kilometres northeast of Fort McMurray, the majority live in a camp and work a 10-day-on, four-day-off schedule," says Sam Gibson, Construction EH&S/Site Services Manager. "However, our 'dry' site (no alcohol allowed), which offers extensive recreation and fitness resources, promotes a strong health and safety culture for employees."

The Firebag site boasts a new covered hockey rink that doubles as a multi-sport complex in the summer. "I believe this is a first for any remote construction camp," Gibson says, adding that a full-time sports and fitness director organizes activities and offers personal training. "We have a slow pitch league with 16 teams, a boxing club, an archery club, an Internet cafe and several recreation centres where workers can exercise, play pool or just relax," Gibson says.

The planned eight-stage Firebag project involves drilling a series of oil wells and pumping them full of steam. The steam heats up the heavy oil, which then flows to the surface. The work is expected to continue until the end of the current decade. Work is beginning on construction of an 80-megawatt co-generation plant as well as added capacity.

For more information, visit [www.suncor.com](http://www.suncor.com) or call Brad Bellows, media relations, at (403) 269-8717.

### Changes to the OH&S Code

As promised, Alberta Human Resources and Employment has committed to a much more timely system for considering occupational health and safety rule changes. In response to stakeholder suggestions, a review will be conducted every two years, starting in 2005.

Current plans are as follows:

- Stage 1 (completed by August 2005): Stakeholder working groups consider suggested changes
- Stage 2 (Fall): Compilation of draft recommendations and posting on AHRE website for comment
- Stage 3 (to be completed by December or January): Working groups consider comments received and finalize recommendations
- Stage 4 (late Winter and Spring 2006): OHS Council reviews/approves and forwards suggested rule changes to the minister for his consideration

For information, visit the WHS website, [www.whs.gov.ab.ca/](http://www.whs.gov.ab.ca/) law/codereview or contact Kenn Hample, Safety Specialist Coordinator, phone (780) 415-0648, kenn.hample@gov.ab.ca.



## 4th Annual Alberta Health & Safety Conference and Trade Fair

November 7-9, 2005

Calgary Stampede Round-Up Centre

Keynote Speaker: Terry Bogoy  
WCB-British Columbia

The Health & Safety Conference Society of Alberta is a not-for-profit multi-purpose organization that includes industry safety organizations, professional organizations, government, Workers' Compensation Board-Alberta and other related groups.

*For more information, visit the Society's website at [www.hsconference.com](http://www.hsconference.com). Or send an e-mail to [info@hsconference.com](mailto:info@hsconference.com).*

## Video about Young Workers on WHS Website

A 19-minute video called Dying to Work examines the perils of teen labour and discovers an astounding statistic – on average, one young worker in Canada dies on the job each week and 60,000 young workers are injured each year. This video is available on the WHS website, [www.gov.ab.ca/hre/whs/workers/index.asp](http://www.gov.ab.ca/hre/whs/workers/index.asp).



Product demo at 2004 HSCSA Trade Show.

# Employers

Want to know more about increasing  
productivity and workplace  
effectiveness?

Alberta Human Resources and Employment has information resources on recruiting and retaining staff, balancing work and home, staff training, employment practices and talking through problems.

We also have reports on labour market statistics for information about employment growth, wages and salaries, productivity and economic trends.

**And much, much more!**

Check out the flyer at  
[www.alis.gov.ab.ca/employers](http://www.alis.gov.ab.ca/employers)

**Alberta**

## AVOIDING INJURY in LABOUR-INTENSIVE JOBS

# Alberta HAS GOT YOUR BACK!

by Naomi Côté

When the management of Alberta Oil Tool saw that some of their workers were having a tough time bending over and lifting all day, they sprang into action.

"We had couplings in baskets that weighed about 4,000 pounds," says Terry Harnack, sucker rod manufacturing manager. "We'd move these baskets into locations where employees sorted them into larger baskets for production." The staff discussed how this labour-intensive process could be modified into a single step that wouldn't require heavy lifting and came up with a handling system that reduced back injuries from one or two a month to zero.

### Labour-saving solutions

This initial success paved the way for other labour-saving solutions at this Edmonton-based oilfield manufacturing company. For instance, to forge

a sucker rod, two employees would switch back and forth every 15 minutes, forging the rods by hand. This process involved lifting a rod weighing anywhere from 44 to 72 pounds and fitting it into a set of dies. Alberta Oil Tool commissioned the design of a robotic arm to automate this process, which resolved all of the back and arm injuries associated with the job.

"We found that the person doing the forging was exhausted by the end of the day, so the production numbers dropped a little bit," says Perry Harnack, general products manufacturing manager. "Putting in the forge arm actually increased production and work in other areas."

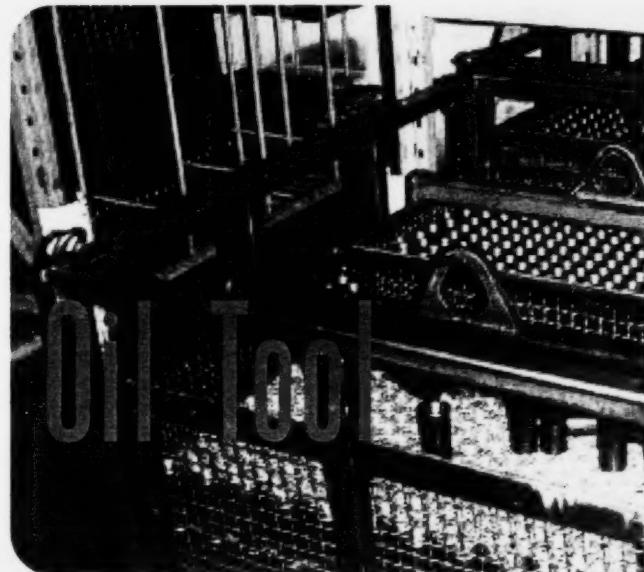
Years before the process was automated, Brent Draper, lead hand, suffered a back injury from lifting and manually forging rod ends. "My back is much better now," he says. "Having the

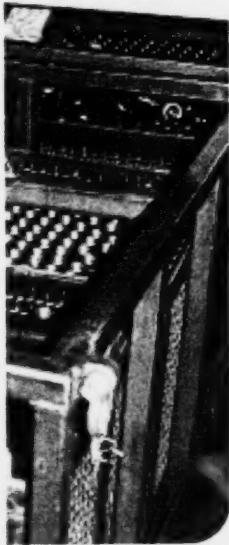
crane in the die preparation area has been quite a back saver. Also, we have an improved transference system. Our carts have better rolling wheels so I can easily bring them to and from the setup area."

"We probably rushed a lot of jobs and didn't lift properly because we didn't have the right techniques and equipment to assist us," Perry Harnack says.

### Keeping fit

Alberta Oil Tool has also been proactive in teaching its employees about the proper way to stretch before their shifts in order to avoid strain and injury. "At a recent tool box meeting we taught five or six exercises for different body parts," says Melony Erickson, director of quality, safety and human resources. "For example, if you're bent over, stand up and bend backwards. Do the opposite motion. We're hoping that as our population





and workforce ages, we'll be able to use some of these techniques to our benefit."

When it comes to managing back pain, Draper and both of the Harnack brothers agree that exercise and activity are the key.

"I've had back pain for over 10 years, and yes, it hurts a little bit," says Terry Harnack. "But I find that if I sit around the muscles tighten up more and it gets worse. When my back starts hurting, I start doing exercises again and within days the problem goes away. If I maintain those exercises, which take all of about

two minutes per day, I don't have back pain anymore. I can go out and golf and do all of the things that I like to do."

Perry Harnack says that although it's the company's responsibility to have the right equipment, it's also the employees' responsibility to take care of themselves by doing exercises to prevent back pain. He finds it does wonders to take part in activities that strengthen your muscles – even for just 20 minutes.

Erickson sums up the current situation at Alberta Oil Tool: "We're more productive, more efficient and there are more cost savings. And when your employees know you're concerned about their health, they're happier. Everybody wins!"

*Naomi Coté is a communications officer at WCB-Alberta.*

## AOT'S BACK-SAVING INNOVATIONS

**INDEPENDENT CRANES FOR EACH FORGE** Employees used to pull out a set of dies (90 pounds per block) while bent over, which resulted in arm and back strain. The solution: cranes that allow the operator to pull out the dies without any strain.

**RACKING FOR GENERAL PRODUCTS** Products used to be piled up on A-frame racks that required loading and unloading to access the required material. The solution: creating crank-out racks with the products separated by size and grade. It's now fast and easy to access the needed material without strain – and it has even created additional floor space.

**PUP JOINTS** Manually lifting these 100-pound joints was very strenuous work. The solution: designing a pup joint feeder that feeds the pipe in and out of the machine, and a crane does the rest – no more lifting required.

### Resources

#### WEB LINKS

- [www.wcb.ab.ca/back@it/default.asp](http://www.wcb.ab.ca/back@it/default.asp)  
2005 Back Education Campaign, a province-wide joint initiative
- [www.albertachiro.com](http://www.albertachiro.com)  
Back health and chiropractic care in Alberta
- [www.wcb.ab.ca/news/2005/050223.asp](http://www.wcb.ab.ca/news/2005/050223.asp)  
Alberta Oil Tool receives Worksafe award

#### IN THE ALBERTA GOVERNMENT LIBRARY – LABOUR BUILDING

*For contact information, see page 23.*

##### Videos

##### Back Injury Prevention Through Exercise

Implementing an "exercise before working" program for all employees – includes back basics and why an exercise-before-work program is important. (VC 0255)

##### Back Safety: Live Well, Live Well

Workers who pay attention to back basics stand a greater chance of protecting their backs from injury and avoiding lost days at work and with their families. (VC 0377)

##### Lifting and Carrying

Topics covered: the construction of the spine and its limitations; how and why injuries can occur if those limitations are not respected through the use of correct lifting and carrying techniques. (VC 0350)

## AVOIDING INJURY in LABOUR-INTENSIVE JOBS

# WEYERHAEUSER PROJECT Helps Tree Planters Stay Healthy

Photo courtesy of FERIC

by **Rebecca Dibbelt**

Weyerhaeuser is turning to sports science to create a safer workplace for its tree planters. The innovative project will help set the bar for the health and safety of tree planters across Canada.

"Tree planting is a big part of our business, and until now the health and safety of our workers in the field hasn't received the attention it should have," says Weyerhaeuser silviculturist Bruce Macmillan. "It's very physical work; there's a high level of exertion and a high potential for injury associated with the repetitive nature of the job. It caused us to question what we could do to keep our tree planters healthy."

In 2002, Weyerhaeuser contacted Selkirk College's sports physiologist Delia Roberts, a former Olympic trainer, who visited its planting sites to devise ways to boost personal safety. The eight-week pre-season Fit to Plant training regime was designed and is now supported by the B.C. Forest Industry Safety Association. All Weyerhaeuser tree planters in

Alberta will participate in 2005, the first full year of the program. The program is designed to help planters build strength, flexibility and aerobic capacity prior to planting season. In a typical eight-hour day, a planter bends more than 1,600 times and lifts a cumulative weight of more than 1,000 kilograms. Coast Range Contracting supplies Weyerhaeuser's tree planters, and operations director Troy Ferguson says he saw excellent results from last season's trial run. "Our Weyerhaeuser planters were able to meet the goal of zero recordable injuries last year, and that's remarkable for any reforestation business," Ferguson says.

"We're thrilled that industry has evolved to this; it's a real credit to Weyerhaeuser to get behind this," says Ferguson. "It affords these young people a better chance they will complete their summer as healthy as when they arrived."

With pre-season training in place, Weyerhaeuser turned to ongoing maintenance of health and safety.

It approached the Forest Engineering Research Institute of Canada (FERIC) to look at best practices dealing with tools and techniques of the trade.

Silvicultural operations supervisor Ernst Stjernberg is in the midst of a study involving 120 tree planters in four locations in various types of terrain across B.C. and Alberta. "We are seeking a better design in the equipment that planters use, and improved understanding of practices they should avoid so they don't over-exert their bodies in a harmful way."

*Rebecca Dibbelt is an Alberta freelance writer. This article is reprinted with permission from the May 2005 issue of The Edge forest business magazine, [www.mediamatchwest.com](http://www.mediamatchwest.com).*

### Resources

#### WEB LINKS

[www.selkirk.ca/treeplanting](http://www.selkirk.ca/treeplanting)  
Fit to Plant program



## Reporting on Recent Convictions Under the Occupational Health and Safety Act

### EMPLOYER

Altapro Cleaning and Disaster Restoration Ltd.

### INCIDENT

On November 30, 2001, a worker was seriously injured when he fell approximately two metres from a scaffold.

### VIOLATION

On April 19, 2005, Altapro Cleaning and Disaster Restoration Ltd. was found guilty of:

- failing to ensure the health and safety of a worker [s. 2(1)(a)(i), Occupational Health and Safety Act]
- failing to ensure that a competent worker was in charge of demolition while work was in progress [s. 192(2)(a), General Safety Regulation]
- failing to take all reasonable steps to ensure materials were contained or restrained to eliminate potential danger [s. 67, General Safety Regulation]

### FINE

Altapro Cleaning and Disaster Restoration Ltd. received a total penalty of \$61,500: a fine of \$10,000 plus a \$1,500 victim fine surcharge; \$25,000 to St. John Ambulance and \$25,000 to STARS Air Ambulance.

### EMPLOYER

Silver City/Famous Players Films Inc.

### INCIDENT

On November 15, 2002, a worker received chemical burns when a bottle of Drain Power spilled on him. The product was 86.3% sulphuric acid.

### VIOLATION

On April 18, 2005, Silver City/Famous Players Films Inc. pled guilty to failing to ensure the health and safety of a worker [s. 2(1)(a)(i), Occupational Health and Safety Act].

### FINE

Silver City/Famous Players Inc. received a total penalty of \$57,750: a fine of \$5,000 plus a \$750 victim fine surcharge, and the remaining \$52,000 to be donated to the Firefighters Burn Treatment Society.

For more information, go to [www.whs.gov.ab.ca/prosecutions/releases.asp](http://www.whs.gov.ab.ca/prosecutions/releases.asp).



## From the Courtroom

by Tamara Trull

## How Many OH&S Cases Go to Court?

THE VAST MAJORITY of Alberta Workplace Health & Safety inspections and investigations do not bring employers and prime contractors anywhere near the court system. Most times when an OHS officer identifies a safety concern, he or she simply requests that the company address the issue. Sometimes there is a compliance order that basically says, "Here is a safety or health concern, and here's what we'd like you to do about it." In more extreme situations a stop-work order is required to ensure the worksite is safe. When a deficiency is noted, companies are generally cooperative - if not appreciative that a potential problem has been rectified.

In the unfortunate event of a fatality or a serious incident, OHS officers have the challenging job of trying to find out what happened. Additionally, the investigation process involves working with the company to ensure that similar incidents do not occur again.

At the end of an investigation an internal review involving the officer and senior staff at Workplace Health & Safety considers whether there was a systemic failure to address safety concerns, a documented failure to perform required maintenance on equipment, an industry-wide problem in that area, and so on. Usually this internal review is the end of the process and no charges are considered.

In a small percentage of investigations, however, all of the evidence is sent to the Crown's office, where an occupational health and safety prosecutor reviews the investigation in detail, meets with the officer and makes a decision about whether to recommend charges. Often, the recommendation is that no charges be laid.

The Crown is bound by Alberta Justice policy to proceed only when the prosecutor believes there is a reasonable likelihood of conviction, and that it is in the public interest to prosecute. Even when charges are laid, the Crown continually reviews the evidence with these policies in mind. If at some point the Crown is no longer satisfied that the evidence supports a prosecution with a reasonable likelihood of conviction, the charges can and will be stayed or withdrawn.

If a prosecution proceeds through the full trial process, neither the Crown nor defence counsel can predict exactly how the Courts will assess the credibility of various witnesses and interpret documents. Because there have been so few workplace health and safety trials in Alberta, unanswered questions remain. The Courts will ultimately determine what is admissible in evidence and whether there has been a violation of Alberta's workplace health and safety legislation.

To suggest topics for future columns, please send a message to [Tamara.Trull@gov.ab.ca](mailto:Tamara.Trull@gov.ab.ca) or [Brian.Caruk@gov.ab.ca](mailto:Brian.Caruk@gov.ab.ca).

Tamara Trull is a Crown Prosecutor at Alberta Justice.





by Lee Craig

Jim Weber was working a 14-hour shift on a hot August day, picking up insect traps on his way to Hudson Bay, and had missed lunch and dinner. Luckily, he had an uneaten garlic sausage that had been sitting in his truck from lunch the day before.

"It was pushing 11 o'clock at night. I knew where I was going, but I didn't think there were a lot of options for eating and I was pretty tired," says Weber, a forest health technician for the Canadian Forest Service.

It was dark out and Weber's dash light wasn't working. He grabbed the bag with the sausage to eat it in the truck cab. Then he was struck with an inspiration. "I was going to get to the motel and relax and eat the sausage as a proper dinner with some fruit that I had."

More than 3,000 confirmed cases of foodborne illnesses are reported in Alberta each year.

When Weber arrived at his destination, he eagerly sat down at the table. "I pulled out the sausage and there were maggots crawling on it, just wee little ones, almost translucent," says Weber. Needless to say, he went to bed hungry that night.

#### Foodborne illnesses

While Weber escaped illness from a lunch left in heat for far too long, many people do risk getting sick from what they bring to work for lunch, particularly if they don't have access to a fridge. More than 3,000 confirmed cases of foodborne illnesses are reported in Alberta each year.

Shauna Dimock, a health inspector and educator for the Capital Health Region, says in Weber's situation he would have been at risk from the bacteria in the sausage, not the maggots. She says storing or preparing your lunch improperly could lead to life-threatening illnesses or, at the very least, extreme discomfort.

"People can suffer from diarrhea, vomiting, fever, headache or nausea. Depending on what the bacteria or agent is, in severe cases they could end up on dialysis or with other kidney issues," says Dimock. "For some people it can be life-threatening, especially those in high-risk groups - the elderly, the very young and, of course, anyone who is on chemotherapy." People often don't report these types of symptoms because they don't recognize that how they feel is a result of something they have eaten, Dimock adds.

#### Keep it cold

The most important step to follow in storing your lunch is to keep it cold. "If you leave a food out at room temperature, especially a high-protein food, bacteria can start to grow in anywhere from two to six hours," says Dimock. She stresses that cooling doesn't kill bacteria once it starts to grow. "Once the bacteria is in the product, it's in there. Even freezing won't kill it."

# LUNCHBOX?

If a lunch is made the night before, Dimock suggests you keep it in the fridge as long as possible before transferring it to a work fridge. If your work site has no fridge, freeze a bottle of water or a juice box and pack perishable items close to that frozen item. Use an insulated lunch bag as well as common sense, such as not putting your lunch in sunlight or against a heat register.

Important steps in food preparation include thawing food properly (do not leave meat, for example, in the sink to thaw for several hours); hand washing between handling meat and other items; making sure your food is cooked quickly (for example, in barbecuing); and using a thermometer to check for doneness.

As for Jim Weber, he is following the most important step: he now has a fridge in a camper truck to keep his lunches cold.

*Lee Craig is an Edmonton freelance writer and editor.*

## Resources

### WEB LINKS

- [www.inspection.gc.ca/english/corpaffr/foodfacts/campinge.shtml](http://www.inspection.gc.ca/english/corpaffr/foodfacts/campinge.shtml)  
Canadian Food Inspection Agency
- [www.canfightbac.org/english/indexe.shtml](http://www.canfightbac.org/english/indexe.shtml)  
Canadian Partnership for Consumer Food Safety Education
- [www.hotlib.com/articles/show.php?t=Food\\_Safety\\_101](http://www.hotlib.com/articles/show.php?t=Food_Safety_101)  
Bag lunch safety tips
- [www.fsis.usda.gov/Fact\\_Sheets/Keeping\\_Bag\\_Lunches\\_Safe/index.asp](http://www.fsis.usda.gov/Fact_Sheets/Keeping_Bag_Lunches_Safe/index.asp)  
USDA Fact Sheet

## PACKING SAFE LUNCHES

You can prevent many foodborne illnesses by preparing your food properly and storing it at the right temperature. Bacteria multiply quickly in the "danger zone" between 4°C and 60°C.

### KEEP IT CLEAN WHEN PREPARING YOUR LUNCH

- Wash your hands well with soap and hot water before making your lunch. Also, wash your hands when you switch from one food to another and after you are finished.
- Clean and sanitize your work surface and all your cooking utensils with a mild bleach solution. Rinse them with clean water and let them air dry or dry them with paper towels.
- Clean and sanitize any reusable food containers and lunch bags or boxes.
- Wash all fruits and vegetables well before you prepare or eat them.

### KEEP YOUR LUNCH AT THE RIGHT TEMPERATURE

- An insulated lunch box is best for keeping food at the proper temperature. If you use paper bags, layer them to increase insulation.
- Keep cold food cold (at or below 4°C) – for example, all meat (including chicken, fish and seafood), eggs, cheese and other dairy products, salads, cooked pasta, mayonnaise and butter.
- If you make your lunch the night before, freeze whatever you can, such as the bread and meat of a sandwich. You can add the lettuce and tomato when you pack it in the morning.
- Put a frozen gel pack or a container of ice with your cold food to keep it chilled.
- Keep hot food hot (above 60°C) – for example, soup, chili, stew and hot chocolate.
- Use an insulated container to store hot food. Preheat the container with boiling water for a couple of minutes before filling it, and don't open it until you are ready to eat lunch.

# FINDING A BALANCE

OH&S Programs in Alberta  
A Centennial Retrospective

by Anita Jenkins

The province of Alberta was launched with high hopes and in high style. Most of the participants in the joyous inaugural festivities held in Edmonton on September 1, 1905, believed their new province would be a "can-do" kind of place with a very bright future.

Although this optimistic view eventually turned out to be quite true, workplaces in Alberta in 1905 definitely had a dark side. The prevailing attitude was that a certain number of workers would inevitably be injured or killed at work – primarily because people are accident prone and/or careless. If a tree fell on a forestry worker or a mine shaft collapsed, these tragic events were chalked up to "bad luck." In these situations, a "good" employer paid for medical or funeral expenses and provided some funds to workers' families.

The appointment of the Workmen's Compensation Board in 1918 was a major step forward. For the next five-plus decades, the WCB gradually expanded and enhanced its role in promoting health and safety in the workplace (see timeline). Significant advancements occurred during the post-World War II boom – injuries were increasing as the economy burgeoned, and workers and their employers were no longer prepared to accept the same level of risk as they had in the past.

## Occupational Health & Safety Act

The Occupational Health & Safety Act, passed in 1977, marked the beginning of a new era. "The OH&S Act was unique in its focus on awareness and attitudes," says Dr. Bob Orford, who was deputy minister of community and occupational health from 1985 to 1987 and a senior government official from 1977 to 1987. "The approach was cooperative, not adversarial," Orford adds. He notes that for the first time the regulations were performance-based

OH&S IN ALBERTA

1906

Coal Mines Act defines the government's authority for mines safety inspections

1913

Coal Mines Act replaced by the Mines Act

1918

Passage of Workmen's Compensation Act and appointment of three-man Workmen's Compensation Board

1920

WCB responsible for workplace safety inspections

1941

WCB's First Aid Regulations promote employee health, good housekeeping and personal protective equipment

("This is what we want to accomplish" as opposed to specifications-based ("The equipment has to look like this").

Barry Munro, who was assistant deputy minister of labour when he retired in 1996 after 16 years with the Alberta government, recalls that at first he and many other key players felt the new centralized legislation was "diluted" and "too generic" because it replaced separate laws governing various industries such as mining. However, Munro soon became a convert and says, "It was the right thing to do."

The decade after the passage of the OH&S legislation was a busy time, says Orford. Achievements of that period, he remembers, included

first aid and noise regulations, and extensive applied research into areas such as the effects of coal dust and asbestos. Alberta was "very good technically," Orford notes. Munro confirms this perception. "We had one of the strongest industrial hygiene units in Canada, and a lab that was the envy of the rest of Canada," he says. "People listened to us at the national table because we had such a strong research area."

#### Alberta's innovative culture

Orford mentions his high regard for Dr. Herb Buchwald, who came from England in 1974 to set up Alberta's industrial hygiene service. Munro concurs, and says it was valuable

to have a number of people like Dr. Buchwald come in from outside the traditional safety world. (Another such person was Bill Rozel, an engineer.) Because of their backgrounds, Munro says, these people were better equipped to "think outside the box."

Orford and Rozel both remember a made-in-Alberta process in which senior people from various branches and departments jointly reviewed every fatal incident. The review team looked at the medical examiner's data and the safety inspector's report, and "put the inspector on the hot seat," says Rozel. Although the inspectors were understandably anxious about this approach, they soon learned that it was an excellent training tool for

#### 1945

Maximum work hours: 8/day or 48 in a six-day week

#### 1947

Discovery of oil at Leduc transforms the Alberta economy and workforce

#### 1948

WCB enforcing legislative requirements for safe work conditions

#### 1959

WCB begins meeting with labour representatives to discuss compensation and safety issues

#### 1963

Health and safety of workers still the responsibility of WCB, within the mandate of the Department of Public Health

#### 1966

WCB institutes General Safety regulations

them, Rozel comments. Also, Orford notes, "It produced some extremely important insights."

It was also during Orford's (and Buchwald's) tenure in Alberta that the current Labour library was established. At the time it was one of the largest OH&S collections in Canada. "The provincial government played a critical role in education before the safety associations were established," says Wally Baer, current director of compliance for workplace health and safety and employment standards.

### Partnerships

In 1988 Rozel took on the job of launching the Partnerships program. This ground-breaking initiative by government, labour and industry arose out of a realization that increasing the number of inspections was not the answer to every problem in occupational health and safety, says Rozel. "It became apparent that the only way to achieve our mutual

goals was to have industry take on a greater degree of responsibility."

"Partnerships was a home-grown concept," says Brian Thomas, Partnerships consultant, "and it was really industry's idea." The emphasis was on shared responsibility, consensus building and collaboration among major participants – about "bringing all our strengths to the table," as Munro puts it.

"Partnerships put Alberta on the map," Munro says. "It was such a success that we were asked by people around the world to come and talk to them about it."

Baer notes that a couple of other groups and sectors have also done a lot to keep Alberta workers safe and healthy. One is the safety associations, which have voluntarily established standards that are generally higher than the legislated minimum and do

"We are fortunate that all of the components are working right and complementing each other."

a lot of training in their industries. Another is the unions, which, Baer says, "do a tremendous job of training their members."

The Work Safe Alberta strategy launched in 2002 has also made major strides by encouraging everyone involved to work together.

### A balanced approach

All of these developments have come together very well, observes Baer. "We are fortunate that all of the components are working right and complementing each other. It is not a case of 'either-or' but rather 'in addition to'. It's all about finding a balance. All of the participants are

**1973**

Industrial Health and Safety (Gale) Commission established to recommend policies for providing a coordinated OHS program in Alberta

**1975**

Gale Commission report identifies a number of fundamental principles for the prevention of illness and injury

**1978**

Alberta Labour takes over workplace safety inspections (from WCB)

**1977**

Occupational Health and Safety Act applies to all workers and employers in Alberta except federal employees and workplaces, farmers and domestic servants

**1979-86**

For the first time the Alberta Cabinet includes a Minister Responsible for Workers' Health, Safety and Compensation (Hon. Bill Diachuk)

working together; people are not trying to fix the blame or point fingers when problems occur."

Government establishes minimum standards in legislation and imposes penalties for non-compliance.

WCB-Alberta provides financial incentives, and industry voluntarily introduces health and safety management concepts. Employers are doing more OH&S training, and doing it very effectively.

And, says Baer, "Alberta has an extraordinary workforce that includes extraordinary employees."

*Anita Jenkins is the editor of the Occupational Health & Safety Magazine.*

## A WORKER'S PERSPECTIVE

Adam (Ab) Chervinski, 85, worked for AGT for just over 37 years, and in the period 1951 to 1978 he logged two million on-the-job miles in Southern Alberta, from Taber to the American border. "The roads were not very good," he says, "and the chinooks often changed minus 20 degree temperatures to above-zero in seconds. But I never had an accident."

Chervinski's "perfectionism," as he describes it, extended beyond safe driving and carefully checking over his vehicle each day. It included keeping the office spotless (he won many Clean Sweep awards for this in the 1970s) and making sure all the staff practiced safe work habits. After hours, he taught safety to new Canadians for many years.

Ab Chervinski and others like him have made no small contribution to workplace health and safety in Alberta.

**1988**

Amendment to Occupational Health and Safety Act provides for increases in the amounts of fines

Alberta Construction Safety Association formed - the first of six such associations that would eventually be funded by WCB premiums

**1989**

WCB sets up pilot project called Work Injury Reduction Program (now Partners in Injury Reduction)

**1990**

Partnerships in Health & Safety launched

**2002-04**

New Occupational Health and Safety Act, Regulations and Code enacted

**2002**

Work Safe Alberta strategy: commitment by provincial industry, labour and safety groups to jointly work towards further reductions in workplace injuries



## Residential Construction Companies FORM SAFETY GROUPS

by Bill Corbett

**A**lberta's residential housing construction industry doesn't have an enviable safety record. Indeed, in 2004, residential construction – led by the roofing and framing sectors – claimed the dubious distinction of having the highest Workers' Compensation Board premium rates of all Alberta industries. This reflects a traditionally high rate of injuries and fatalities, often the result of unprotected falls from roofs or skeleton structures.

But things are getting better. WCB claims by residential and general contractors dropped from 258 in 2003 to 228 in 2004. Consequently, premium rates for the various residential sectors declined about 10 per cent in 2005 and are scheduled to drop again in 2006 (see chart).

Reasons for the improvement include the province's new Occupational Health and Safety Code, which includes more stringent provisions for fall protection and personal protective equipment. But much of the credit can go to the residential construction industry itself, which has recently formed safety groups in Calgary and Edmonton.

"Even before the new code came in, a number of builders in Calgary realized there were safety issues that needed to be addressed," says Allen Cayen, safety officer with Trico Homes

and chairman of the Calgary Residential Builders Safety Group. The Calgary safety group was formed in 2003 and now has a membership of some 20 builders, representing about 80 per cent of the city's residential building permits.

"We decided it was important to implement basic safety requirements at the same time," says John Tucker, health and safety supervisor for Carma Developers' Heartland/Hawthorne Homes and former chairman of the Calgary safety group. "If only one company said, for example, that their framers had to tie off, some guys would just go down the street to a builder that didn't have that requirement."

The safety group's requirements are in line with safety code regulations, which include having employers ensure their employees not only wear necessary personal protective equipment but also use it properly and are trained to do so. The code also stipulates that those working on flat roofs or creating skeleton structures are no longer exempt from using fall protection.

"A lot of builders are afraid to require guys to wear fall protection gear, because a lot of guys haven't done it for 20 years," says Tucker. "Guys are still getting injured and killed because their builders are not complying with the code. But things are starting to change."

The Calgary Residential Builders Safety Group has regular meetings, where members discuss new trends, share ideas and listen to presentations from guest speakers (such as Alberta Workplace Health & Safety officers) and safety equipment suppliers. "A lot of companies are at different stages of developing their safety programs," says Cayen. "The idea is to have an ongoing dialogue so everyone's speaking the same language and is on the same page. I've found that safety people from different companies are all prepared to share what they've learned. We want to help create standardized programs and safe work practices."

Edmonton's Residential Safety Group was started around the same time as its Calgary counterpart. Edmonton group founder and president Duncan Matheson, safety officer with Sterling/Pacesetter Homes, went through the phone book and encouraged all the



## NEW FALL PROTECTION SYSTEM

DARRELL LANDON, SAFETY MANAGER for the Qualico Group of Companies, started developing a new fall protection system and John Tucker, health and safety supervisor for Heartland/Hawthorne Homes, finished it in 2004. While previous travel-restraint systems were either cumbersome or failed to prevent all ground-striking falls, the new system protects residential workers at every stage of framing and roofing a house. The open-truss system is reinforced by a two-by-six stringer that runs from one gable to the other along the king post. Four or five straps are then attached to various points of the stringer, allowing workers – wearing a harness, rope and rope-grab system – to tie into the point closest to where they are working. When the house sheeting is completed, the straps still stick through the peak, allowing roofers, siding installers, shingle loaders, and eavestrough installers to also use the system.

"It provides full fall-arrest protection," says Tucker. "If you go over the eave of the roof, or down through

the middle, or over the gable end, it will prevent you from hitting the ground." The system meets all the code requirements for fall protection and is certified by a professional engineer.

"Over the last two years, there have been 24 reported fall incidents and four fatalities involving guys not using any fall protection, even though it's in violation of the code," says Tucker. "The good news is 10 home builders in Edmonton and two or three in Calgary have already adopted this system. I know of at least eight instances already where the system has arrested a fall and saved the life of the worker involved."

"We spent a fair bit of time and money testing the system and getting it certified, but we didn't patent it. We're willing to share it with anyone who wants to use it. For about \$225 in protective equipment, any worker can buy everything he needs for full fall-arrest protection."

city's builders to join the fledgling group. The original membership of 32 has shrunk to a core of about 10 companies, though they still represent the majority of Edmonton houses being built.

"We felt we could accomplish a lot more as a group than on an individual basis," says Matheson. Besides monthly meetings, the Edmonton group members conduct tours of new subdivisions to see what safety equipment and practices are being used.

"When I started working as a safety officer, I was told (to take a hike) off the job site 15 times a day. It's a slow process. We're trying to change a culture, and it's tough telling a 60-year-old he's got to start wearing safety glasses and a hard hat," says Matheson. "But it's a heck of a lot better than it was two years ago. We've got a code, so we've got a rulebook, and our member companies have health and safety officers and they're all buying into it."

Group organizers hope the positive results from their initial efforts are just the beginning and that their often-maligned industry will soon have much safer work sites.

"There's no doubt residential construction sites can be hazardous places to work," says Cayen. "But nobody should have to go to work and worry about getting hurt or dying. Everybody deserves a healthy future."

*Bill Corbett is a Calgary writer. His latest book, The 11,000ers of the Canadian Rockies, is a climber's guide to the 54 peaks in the Canadian Rockies above 11,000 feet, all of which the author has climbed.*

### Resources

#### CONTACTS

**Calgary Group:** Allen Cayen, (403) 287-9300

**Edmonton Group:** Percy Pouliot, (780) 431-8812

#### WEB LINKS

[www.calgarysun.com/cgi-bin/niveau2.cgi?s=generic&p=88768.html&a=1](http://www.calgarysun.com/cgi-bin/niveau2.cgi?s=generic&p=88768.html&a=1)  
Calgary Sun article on the Calgary Group

#### ACSA BOOKLETS

Copies of booklets on Siding and Eavestroughing Best Practices and Wood Framing Best Practices are available from Alberta Construction Safety Association offices in Edmonton, phone 1-800-661-2272 or Calgary, phone 1-800-661-6090.

#### IN THE ALBERTA GOVERNMENT LIBRARY - LABOUR BUILDING

For contact information, see page 23.

##### Videos

**Falls in the Workplace** (VC 0400) and

**High Impact Fall Protection** (VC 0322)

See descriptions in January 2005 issue of this magazine, page 8.

##### PPE: Don't Start Work Without It

Personal protective equipment includes eye and face protection, hearing protection, head protection, hand protection and foot protection. (VC 0394)

##### PPE: The Right Choice

Industrial workers recall how the choices they made about personal protective equipment had an impact on their lives. Topics include hard hats, eye protection, earplugs and earmuffs, hand protection and safety footwear. (VC 0408)

## Focus on Human Performance

## Part Two

# Working in the Cold



by Ray Cislo

**I**t's important to realize that environmental conditions can have a bearing on your personal safety and your ability to work effectively. Working in the cold can result in hypothermia or frostbite – and even the heavy and bulky clothing worn for protection from the cold can cause problems on the work site.

Hypothermia, or below-normal body temperature, is generally the result of a combination of factors, including cold and windy weather, fatigue and clothing that is poorly insulated or wet.

There is a range of outward signs of hypothermia, depending on the severity.

- Mild hypothermia: mild shivering, discomfort and muddled thinking
- Moderate hypothermia: violent shivering, loss of dexterity of the hands and feet, and an inability to think and pay attention
- Severe hypothermia: unconsciousness and death

Clearly, the lapses in judgment and attention span that occur even in mild cases of hypothermia can have serious consequences on the worksite.

Exposure to cold can reduce muscle power and grip strength, thus limiting your ability to work for extended

periods. Reduced power and strength can make climbing a ladder or similar structure very challenging.

Cold combined with vibration can reduce the flow of blood to the hands and fingers and cause hand-arm vibration syndrome (HAVS), also known as "vibration-induced white finger" or "dead-finger." Symptoms include numbness, loss of grip strength and clumsiness with the hands.

Many workers rely on their hands to operate equipment controls, adjust process controls, sense surface temperatures and finishes, and hold heavy or awkward tools. In cold weather, these workers may take longer to perform an action and/or need to attempt an action repeatedly. In some cases they may be altogether unable to perform an action until they get warmed up or alter their clothing.

In addition, exposed skin can be affected by the cold. Frostbite results from thick layers of tissue freezing solid. The affected area feels hard and cold, and turns white or grey. Frostnip is a mild form of frostbite affecting only the skin's outer layers. Either condition affects your health and can influence your ability to work safely.

Clothing worn in the cold can also affect performance. Hats and hoods may interfere with hearing, vision and movement. Bulky clothing layers may restrict movement, particularly in tight spaces, and increase the amount of effort required to move. Gloves, mittens and overmitts may reduce dexterity and "feel," while heavy and bulky footwear may not fit into footholds or onto foot pedals. Clothing "systems" appropriate for the task and the temperature can overcome many of these limitations.

*Ray Cislo, P.Eng., B.Sc.(H.K.), is a safety engineering specialist at Workplace Policy and Standards, Alberta Human Resources and Employment.*

## Resources

### WEB LINK

[www.gov.ab.ca/hre/whs/publications/pdf/mg021.pdf](http://www.gov.ab.ca/hre/whs/publications/pdf/mg021.pdf)  
Working in the Cold, Alberta Health and Safety Bulletin

[outside.away.com/outside/features/200212/200212\\_popsicle\\_splash.html#](http://outside.away.com/outside/features/200212/200212_popsicle_splash.html#)  
Video clips about hypothermia and cold water immersion

[www.umanitoba.ca/faculties/physed/research/people/giesbrecht/Cold\\_Weather\\_Clothing.pdf](http://www.umanitoba.ca/faculties/physed/research/people/giesbrecht/Cold_Weather_Clothing.pdf) Cold Weather Clothing



# Partnerships NEWS

*Partnerships*  
IN HEALTH AND SAFETY

Partnerships in Health and Safety is a non-regulatory, province-wide injury prevention program sponsored cooperatively by government, labour and industry. The program offers:

- tools to implement a health and safety management system
- guidance in applying for a Certificate of Recognition (COR)
- potential for premium refunds from the Workers' Compensation Board-Alberta

For more information, call 1-866-415-8690 toll free in Alberta or 415-8690 in Edmonton and area. Or visit [www.whs.gov.ab.ca/partners](http://www.whs.gov.ab.ca/partners).

## New Partners in Health and Safety

Welcome to three new Partners in Health and Safety:

- Kawneer Company Canada
- Universal Compression Inc.
- Bird Construction Company Limited

## First Youth Health and Safety Conference

"What's In It 4 U," the first youth health and safety conference sponsored by the Safe Communities Coalition of Central Alberta, targeted youth who are new to the workforce or about to enter the workforce. Held in Red Deer on April 23, 2005, the conference featured several guest speakers, including Tammy Doyle and Barry Weatherall, who suffered serious injuries at work, and Julie Hamilton, whose son died in a workplace incident.

## Partnerships Strategic Plan

The Partnerships Strategic Plan for 2005-06 describes the program's growth and accomplishments, and outlines major initiatives for the next year.

The current strategic directions have two major sources. First, an evaluation of the Partnerships program completed in 2003 (the "Banister Report") found that Partnerships has many successes and enjoys industry support, but the report also made recommendations for action to support continued program growth and improvement. Secondly, the Work Safe Alberta Initiative has helped to heighten awareness of health and safety among Albertans.

The Partnerships program continues to emphasize quality and credibility, and has begun to expand into new industry sectors. The Alberta Restaurant and Foodservices Association became a formal Partner in 2004, and in that same year the province's first independent restaurant, Chili's, achieved a Certificate of Recognition. During 2004 employers in the retail, airline and newspaper industries also achieved CORs.

Partnerships has grown from 1,000 COR-holders in 1997 to over 5,000 at the end of 2004. This rapid growth has presented many challenges for the program and will continue to do so.

## HIGHLIGHTS OF THE 2005-06 STRATEGIC PLAN INCLUDE:

- ① reviewing the small employer program and identifying potential changes for improvement
- ② increasing Partnerships participation in the retail and health care industries (The Continuing Care Safety Association's new status as a funded safety association will assist with program growth for its members.)
- ③ investigating the development of a program specific to owner/operators in order to provide tools better suited to employers of this size
- ④ investigating the need for and acceptance of a new "Gold Standard" or "Best Practices" level of Partnerships for employers who wish to pursue continued improvement
- ⑤ negotiating the possibility of equivalency between the Partnerships standard and the International Standards Organization, Occupational Health and Safety Assessment Series 18001 Standard (As the Partnerships program expands into other jurisdictions such as British Columbia and Saskatchewan, Alberta will be challenged to remain a leader, address requests for equivalency and respond to the potential for a western or national standard.)

Retaining program quality and balancing stakeholders' business interests will be of primary importance. Improving standards without creating disincentives to participation will also require attention.

The Strategic Plan has been sent to stakeholders and posted on the Partnerships website.

# GE Energy CALGARY

by Kerry Tremblay

*GE Energy in Calgary, a major manufacturing facility, was awarded the Partnerships Certificate of Recognition three years ago. It was the first of the GE sites in Alberta to receive the award.*

Safety starts at the front door, the moment visitors enter the lobby of the blue GE Energy building near the Calgary airport. The security guard greets new arrivals with a smile and invites them to sign in while awaiting their internal contact. At GE Energy the next few minutes of conversation aren't about the weather, the traffic or an offer for coffee - they are about what happens if there is an emergency and the alarm sounds. Visitors are asked to turn and look toward the flag poles in the parking lot, which is the gathering point for visitors if they need to evacuate the building. There's no misunderstanding about where to go or what to do. Every visitor is also handed an information sheet that outlines who to call in case of emergency and includes a map of the facility.

#### Precise, time-consuming work

This GE site designs, manufactures and assembles monitoring and control equipment that delivers reliable and quality power,

using real-time information technology specifically developed for electric power applications. It's precise, time-consuming work. Technicians need steady hands and keen eyes to put together and test the circuit boards, and assemble them to stringent specifications.



GE Energy technicians have exactly the right amount of light and sit in ergonomic chairs, at benches that are often height-adjustable. Depending on the job, sometimes even the floors are raised to ensure that people are at the right angle to do the job effectively.

The manufacturing techs take mandatory stretch breaks every morning and afternoon. "The area lead stands in the middle of the aisle where everyone can see and leads a stretch that's specific to the job," says Lynn Burns, environment, health and safety manager. "Since we put the stretch breaks in place about four years ago, a lot less people get stiff or have headaches or other ergonomic risk symptoms."

#### Covering all the bases

Within the company, staff serve on various safety-related committees and teams, and receive extensive training that is both computer-based (often offered in many languages) and face-to-face. The first aid team alone has 45 members. This is because the company's goal is to train as many employees as possible in first aid. All personnel who visit field sites are currently trained emergency first aiders.

Safety consciousness at this facility is part of the bigger framework for the Atlanta, Georgia-based company, says Burns. "GE Energy Headquarters has a blanket EHS policy that all facilities have to comply with. It covers everything from management practices to lockout/tagout practices. Individual sites modify these to accommodate local and regional differences in regulations."

According to Ken Kan, GE Energy EHS manager for global manufacturing, "GE is, year after year, one of the world's most admired companies. GE wants to be the best, and expects to be the best."



Stretch break at GE Energy, Calgary  
Photo courtesy of GE Energy

Kan says one of the advantages of working for this big corporation is the tools that have been designed to help drive EHS performance. For example, a computer program tracks EHS-related actions. "If during a site inspection Lynn (Burns) notices that a particular area of the (manufacturing) floor needs a new or different type of personal protective equipment, this is entered and responsibility tracked through the computer application. A due date is given by when it needs to be resolved. The action is tracked, and reminders are sent to the person responsible for getting the job done. If it's not done, then the person's supervisor gets an automatically generated note." The site's responsiveness in completing actions is tracked and rolled up in a "closure rate" metric that the site leadership is measured on. That way, he says, the request doesn't get lost in the day-to-day rush of business. People, including senior management, are held accountable for getting the tasks done.

Nina Novak, Alberta Workplace Health & Safety officer, says GE "seems to have covered all the bases, and then some. They have a very comprehensive approach, and that's labour-intensive." Getting to that point, she says, takes management commitment, effort and support for health and safety.

#### Sharing best practices

Perry Scott, a Partnerships consultant who works with GE Energy to set up internal goals for improvement, says that in GE's case most of the issues he helps with are finding

"GE wants to be the best, and expects to be the best."

ways to increase their safety profile. "GE Energy is very progressive and dynamic."

Mike Joyce, executive director of Manufacturers' Health and Safety Association, says, "The GE people's enthusiasm passes on to others. When GE people attend our meetings, it gives some of our other members the ideas and incentives they need to move forward. Sometimes GE does things that others just haven't thought of." And the company is willing to share what it has learned and its best practices from around the globe.

When the company received its Partnerships Certificate of Recognition, senior management from the Atlanta headquarters came to the beef-on-a-bun celebration. When recertification time came this year, again senior managers came, and the workers involved in the COR were recognized. The program's success is also celebrated internationally through the parent company's website.

*Kerry Tremblay is a Calgary freelance writer specializing in safety and training.*

#### Resources

##### WEB LINK

[www.gepower.com/about/press/en/2003\\_press/012003.htm](http://www.gepower.com/about/press/en/2003_press/012003.htm)  
GE Energy press release



by Bob Christie

## Web Watcher

### Paperwork Can Make You Crazy

**R**unning a good health and safety program in an organization often presents two major difficulties: managing issues seemingly unrelated to H&S ... and the damnable paperwork.

In Alberta many of those paperwork issues are about to find an elegant solution. A new company called Forge Dynamics is releasing its first version of a really intriguing Internet application called OPTIC. OPTIC can store your MSDSs as well as prompt you when they need to be updated. It can track incident investigations and, through an interface with WCB-Alberta computers, can even file the necessary paperwork electronically. OPTIC can manage subcontractors records as well as company personnel records. It can track training requirements and update schedules for policies and other documents. Forge is also working on a Quality module (to assist in the process leading to ISO certification) and an Equipment Maintenance module. Both will be available soon.

What is particularly delicious is that the whole system (with the exception of a tiny notification kernel) runs not on your technology but on theirs. For those who are hypersensitive about data security, OPTIC can be mounted completely on your own system. However, the security at Forge and the benefits of letting them handle things make hosting your own site a less attractive option.

OPTIC costs from as little as \$10,000 for a smaller company to well over a quarter of a million dollars for a big facility, and there is also a nominal annual maintenance fee (in the order of \$100 per employee). Of course, the issue is not what it costs but what it saves. The cost-benefit issue is easy to resolve once you compare the cost of something like OPTIC to the total cost of just one incident.

If you are interested in taking a serious look at OPTIC, you will find Forge at [www.forgedynamics.com/](http://www.forgedynamics.com/). Company founder and President Mat Matthews assures us that he and his people are only too willing to come to your location to demonstrate OPTIC. Do call or fire off an e-mail to request a demo. I think you will be impressed, particularly in this day and age of manpower shortages.

*Bob Christie is a partner at Christie Communications Ltd., a multimedia development company in Edmonton. Bob supplies most of the Web link resources for the articles in this magazine.*



## Real World Solutions

What improvements have you made at your workplace? If you've found a solution worth sharing, please send it to [ray.cislo@gov.ab.ca](mailto:ray.cislo@gov.ab.ca).

### LIFTING HUNDREDS OF PLANT POTS

#### THE PROBLEM

Workers at garden centres may need to handle hundreds of small plant pots in a day – reaching, lifting, carrying and lowering them.



#### A SOLUTION

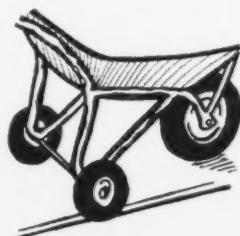
A light, length-adjustable pot lifter can handle several pots at once. The lifter could be adapted for use with other objects.

**BENEFIT**  
By greatly reducing repetitive bending and lifting, the worker avoids overusing the back and arms.

### WHEELBARROW CONVERTED TO DUMP CART

#### THE PROBLEM

Wheelbarrows need to be raised up by the handles to ride on their single wheel.



#### A SOLUTION

Convert the wheelbarrow to a push cart by adding two wheels at the back. Various conversion kits are available commercially.

#### BENEFITS

Workers avoid unnecessary lifting, and when necessary the wheelbarrow can still be used on its single front wheel.

## Work-related incident fatalities January 2005 – April 2005

The following information about deaths caused by work-related incidents or exposure is published to remind readers of the importance of workplace health and safety. In many cases the investigation into these fatalities is continuing. Final investigation reports are filed at the Alberta Government Library – Labour Building Site and can be reviewed there or at [www.whs.gov.ab.ca/fatalities](http://www.whs.gov.ab.ca/fatalities). To protect personal privacy, the fatality descriptions do not include the names of the deceased.

### The following fatalities have been or are being investigated.

A **28-year-old machinist** with approximately one year of experience was operating a vertical turret lathe. While the machine was still running, the worker attempted to cut a long strand of metal shaving from the lathe. His foot got caught in the metal strand, and he was pulled into the lathe.

A **27-year-old logger** parked a skidder on a hill. When the skidder began to roll down the hill, the logger attempted to stop it and was crushed under the blade.

A **59-year-old equipment operator** is presumed to have drowned but his body has not yet been recovered. As a member of a crew that was constructing an ice bridge across a river, the worker was operating a snowcat and the machine broke through thin ice.

A **60-year-old security guard** was found dead in a parking lot, pinned under the wheels of his personal van. The worker started the vehicle to check the level of transmission fluid. He shut off the engine and went to the rear of the vehicle to get some more fluid. The van then rolled back over the worker.

A **25-year-old apprentice welder** was killed when struck by pieces of structural steel.

A **50-year-old company president** was standing on top of a load of steel beams on a flat-bed trailer and directing a forklift operator who was placing two additional steel beams on the load. When the beams fell off the forklift onto the ground, the worker also fell to the ground and was crushed under one of the beams.

A **51-year-old surveyor** was struck by a falling tree that he was cutting down.

A **55-year-old labourer** was helping other crew members remove a piece of steel from a hole opener. A metal tong appears to have struck the worker in the head area.

A **57-year-old planer mill technician** tried to reposition a doubled-up board on the planer infeed transfer table. When the board contacted the infeed mechanism it shot out and struck the worker in the abdomen. He died from his injuries in hospital a few days later.

A **58-year-old rig manager** was working with a crew that was using a forklift to transfer compressed nitrogen accumulators and nitrogen cylinders from a tractor trailer to a pick-up truck. When one of the accumulators dislodged from the pallet, the worker went to stabilize it but it fell to the ground and ruptured, killing the worker.

A **43-year-old framer** sustained fatal injuries when he fell 4.2 metres from a roof. He was not wearing fall protection.

A **21-year-old oilfield worker** was found unconscious in a separator building that contained the piping controls for a horizontal pressure vessel. The cause of death has not been determined.

A **70-year-old worker** was delivering flyers in a freezing rain storm when he slipped and fell on the ice. The worker later went to hospital, where he died of his injuries several days later.

## Workplace Health & Safety (WHS)

### Contact Workplace Health & Safety any time

For occupational health and safety information and assistance, or to order Workplace Health & Safety publications, phone the Contact Centre at 1-866-415-8690 toll free (415-8690 in Edmonton and area) or visit [www.whs.gov.ab.ca/expert](http://www.whs.gov.ab.ca/expert).



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### Alberta Government Library Labour Building Site

To review the large selection of occupational health and safety information materials available through the Alberta government, go to [www3.gov.ab.ca/hre/library/](http://www3.gov.ab.ca/hre/library/)

To borrow materials, either contact your local library and make your requests through the inter-library loan system or visit the Alberta Government Library:

3rd floor, 10808 - 99 Avenue

Edmonton, AB T5K 0G5

Library phone (780) 427-8533

Audio-Visual Services phone (780) 427-4671

To reach either of the above numbers toll-free in Alberta, dial 310-0000 followed by the area code and phone number.

Fax (780) 422-0084

*Workplace Health & Safety is a division of Alberta Human Resources and Employment and falls under the jurisdiction of Minister Mike Cardinal.*

*Return Undeliverable Canadian Addresses to:*

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